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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/896,992	07/02/2001	Anna Belle Williams	DC-02825	1188

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EXAMINER	
STERRETT, JONATHAN G	

ART UNIT	PAPER NUMBER
3623	

NOTIFICATION DATE	DELIVERY MODE
07/13/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

tmunoz@hamiltonterrile.com

Office Action Summary	Application No.	Applicant(s)	
	09/896,992	WILLIAMS ET AL.	
	Examiner	Art Unit	
	JONATHAN G. STERRETT	3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 September 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-16 and 48* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-16, 48* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Final Office Action is responsive to 23 September 2008. Currently **Claims 2-16 and 48** are pending.

Response to Amendment

2. The 35 USC 101 rejections are withdrawn

Response to Argument

3. The applicant's arguments have been fully considered but are not persuasive.

The applicant argues that the combination of the references fails to teach identifying potential risk due to potential disruptions in material supply of a component from a set of components and the set of sub-components, as taught by claims 2 and 48. The applicant further alleges that the risks associated with geopolitical risk, capital cycle risk and innovation risk are not taught by the cited references.

The examiner respectfully disagrees.

The limitations are taught by a combination of the references. In the recent KSR decision, the court emphasized "the need for caution in granting a patent based on the combination of elements found in the prior art". In this case the claimed elements are found in the prior art.

Feldman teaches identifying potential risk due to potential disruption in material

supply of a component from a set of components (see Figure 5G, here the potential disruption in terms of "Revenue at Risk" from components 1-3 due to a component shortfall). As noted previously, Feldman is focusing on the supply impact of components for a product. Feldman does not teach where the components are broken down into subcomponents. This feature is taught by Hendrick (see Figure 11-2 on page 229 – here a product is broken down into components and subcomponents). Hendrick teaches the need to break a product down into its subcomponent parts (the lowest level) because Hendrick is teaching the need to ensure that ALL parts are ordered to support a manufacturing operation. Hendrick is teaching Material Requirements Planning (MRP I) where the planning of acquisition for a product is discussed. This acquisition is the obtaining of all the parts, screws, materials, etc. necessary to build a product, because MRP I is the planning of obtaining all materials (i.e. components and sub components) necessary to build a product in a manufacturing context.

As noted above, Feldman teaches a method where the supply risk, in terms of revenue, that would be incurred based on not being able to obtain certain components (i.e. a supply disruption). Applying Feldman's teaching, from a basis of looking at certain components, to those of Hendrick, which looks at all materials on a hierarchical bill of material (BOM - see page 228 column 1 middle para – all elements needed to make a product from a bill of material), would provide a predictable result because it would show the supply disruption due to risk of all components in the MRP I schema which accounts for all parts (components and subcomponents) necessary to build a product. Additionally, there is motivation to combine since a person performing MRP I

would have the goal of ensuring that all parts to build a product are obtained. Modifying Feldman by the teachings of Hendrick would provide someone who is performing manufacturing planning the ability to determine what the impact is of not being able to obtain parts across the entire bill of material.

Applicant further argues that "geopolitical risk, capital cycle risk and innovation risk" as claimed is not taught. Examiner disagrees. These are mere labels identifying the risk and do not positively recite how they would impact the supply disruptions differently. Thus they are nonfunctional descriptive material. The examiner further notes that these limitations are taught in the reference as per paragraphs 7, 14, 43, 45, 48, 86, and 89, which specifically disclose risks associated with geography (location, earthquakes, fires, natural disasters, etc.) and political issues (see political risk insurance, wars, political turmoil, strikes), as well as capital risks (credit risk, etc.), supplier power (labor availability, supply on hand, etc.). See also paragraphs 11-12 and 38)

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 2-16 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Feldman et al. (U.S. 2002/0188496) in view of Hendrick et al. ("Production/Operations Management").

As per **claim 2**, Feldman et al. teaches a method (and where the method is implemented on a computer system - see para 25) of identifying potential risk, the risk due to potential disruptions in material supply to a manufacturing facility, the method comprising:

determining a set of components for an assembled product and storing the set of components (See paragraphs 10-11 and 43, wherein the bill of materials and components for final products are identified, as well as the suppliers of these components. See paragraphs 26, 34, and 45, which discloses a database that stores the inputs of the system);

The ability to store information related to components (See paragraphs 26, 34, and 45, which discloses a database that stores the inputs of the system); and identifying potential risk due to potential disruptions in the continuity of material supply of the component, the potential risk due to potential disruptions in continuity of material supply including risks associated with supplier power, geopolitical risks and capital cycle risks (See paragraphs 7, 14, 43, 45, 48, 86, and 89, which disclose risks associated with geography and political issues, as well as capital risks associated with financial value. See also paragraphs 11-12 and 38).

However, Feldman et al. does not expressly disclose innovation risks or determining a set of sub-components for the set of components and combining the set of components and the set of sub-components.

Hendrick et al. discloses:

determining a set of sub-components for the set of components (See pages 228-9 and page 231, figure 11-3, wherein subcomponents and subassemblies are determined); and

combining the set of components and the set of sub-components (See page 230-232, which discuss building a bill of materials and product structure trees by combining this information); and creation risk (See page 230, where supplying vendors also receive supply for their produced components and build the deliverables given to the manufacturer who assemblies the final product).

However, Hendrick et al. does not expressly disclose innovation risk.

Both Hendrick et al. and Feldman et al. disclose components parts being supplied by a supplier so that an end product may be manufactured. Feldman et al. specifically identifies suppliers that supply the components to the manufacturer, as well as geopolitical and capital risks associated with this supplying. Feldman et al. further discloses bill of materials and identifying the components that are assembled to produce a final product. Hendrick et al. specifically discloses determining assembly and subassembly parts, generating bill of materials, and the problems that can possibly occur when procuring different parts from different outside vendors, such as the parts coming too early, too late, etc. It would have been obvious to one of ordinary skill in the

art at the time of the invention to include subcomponents in the bill of materials and components of Feldman et al. in order to more efficiently meet the demand for the final product by more appropriately coordinating the components and subcomponents needed for the final product. See page 228-230 of Hendrick et al. which discloses these motivations.

Further, Feldman et al. discloses risks associated with suppliers that effect supply. Feldman et al. further states in paragraph 86 that other risk factors could affect the supply chain. Hendrick et al. discloses considering in the lead time it takes to get a component or subassembly from a vendor the time it takes for the supplying vendor to assemble and build the component or subassembly. It is old and well known that innovation is a type of creation performed by supplying vendors, especially in the field of electronics where the components rapidly change with time. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to consider innovation in the creation component of lead time of Hendrick et al. in order to increase the accuracy of order scheduling by considering the risk on components and to final assembled products, thus ensuring that enough on-hand inventory is available to assemble the final product. See pages 230 and 232 of Hendrick et al., which discuss the importance of timing and available inventory when building an assembly. See also paragraphs 10, 13, and 86, of Feldman et al.

As per **claim 3**, Feldman et al. discloses storing the country of origin of the set of components (See paragraphs 7, 14, 43, 45, 48, 86, 89, wherein the geographic area

and politics of the country are inputs to the system. See paragraphs 26, 34, and 45, where inputs are stored).

As per **claims 4 and 11**, Feldman et al. discloses storing an indicia of and evaluating geopolitical risk associated with the country of origin of the set of components, as well as based upon geographic concentration and a risk associated with a geographic location (See paragraphs 7, 14, 43, 45, 48, 86, 89, wherein the geographic area and politics of the country are inputs to the system, this including risk associated with politics and the geographic are of the supplier. See paragraphs 26, 34, and 45, where inputs are stored)

As per **claims 5 and 6**, Feldman discloses storing an identity of a supplier of the set of components and an assembler of the set of components (See paragraphs 43, 45, 49).

As per **claim 7,** Feldman et al. teaches determining a product assembled by a manufacturer, the product including the set of components (See paragraphs 43, 45, 49, wherein the product is assembled by the manufacturer. See paragraphs 10-11 and 43, wherein the bill of materials and components for final products are identified).

As per **claims 8 and 14**, Feldman et al. does not expressly disclose end-of-life dates of components. Hendrick et al. teaches identifying risk associated with parts arriving too early, carrying costs, and net inventory taking into account inventory already held by the manufacturer (See pages 230 and 232). However, Hendrick et al. does not expressly disclose an end-of-life date of the set of components.

Both Hendrick et al. and Feldman et al. disclose components parts being supplied by a supplier so that an end product may be manufactured. Feldman et al. specifically identifies risks associated with supplied components, such geopolitical and capital risks associated with this supplying. Hendrick et al. teaches identifying risk associated with parts arriving too early, carrying costs, and net inventory. It is well known in inventory management that different resources, such as the paint of Hendrick et al., have shelf lives and thus must be used by a specified date, at which point they are no longer a usable resource. Thus, many companies account for these dates when ordering resources and considering on-hand balance. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to consider end-of-life date of the set of components when ordering needed components and subcomponents, in order increase the accuracy of order scheduling, thus ensuring that enough on-hand inventory is available to assemble the final product. See pages 230 and 232 of Hendrick et al., which discuss the importance of timing and available inventory when building an assembly.

As per **claim 9**, Feldman et al. teaches determining whether components are at risk due to the capital cycle risk, the capital cycle risk being determined by predictability of demand versus supply and capital flexibility (See paragraphs 7, 14, 43, 45, 48, 86, and 89 which disclose risks associated with capital risks associated with financial value and demand and supply issues. See also paragraphs 11-12 and 38).

As per **claim 10,** Feldman et al. teaches storing an identity of a fabricator of the set of components, wherein the identity of the fabricator includes the name of the

foundry (See paragraphs 13, 49, 58, 65, 81, 84, and 89, wherein both parts are produced (i.e. fabricated) at facilities and supplied to a manufacturer, and where a manufacturer assembles parts and sections to fabricate the product).

As per **claim 12**, Feldman et al. discloses evaluating whether components from the set of components are implicated based upon an identified risk, such as risks associated with suppliers that effect supply (See paragraphs 14, 43, 45, 48, 86, and 89). However, Feldman et al. does not expressly disclose innovation risk.

Hendrick et al. teaches whether components from the set of components are implicated based upon an identified creation risk (See page 230, where supplying vendors also receive supply for their produced components and build the deliverables given to the manufacturer who assemblies the final product).

However, Hendrick et al. does not expressly disclose innovation risk.

Both Hendrick et al. and Feldman et al. disclose components parts being supplied by a supplier so that an end product may be manufactured. Feldman et al. discloses risks associated with suppliers that effect supply. Hendrick et al. discloses considering in the lead time it takes to get a component or subassembly from a vendor the time it takes for the supplying vendor to assemble and build the component or subassembly. It is old and well known that innovation is a type of creation performed by supplying vendors, especially in the field of electronics where the components rapidly change with time. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to consider innovation in the creation component of lead

time of Hendrick et al. in order to increase the accuracy of order scheduling, thus ensuring that enough on-hand inventory is available to assemble the final product. See pages 230 and 232 of Hendrick et al., which discuss the importance of timing and available inventory when building an assembly.

As per **claim 13**, Feldman et al. teaches evaluating whether components from the set of components are implicated based upon an identified risk due to a supplier concentration (See paragraphs 7, 14, 43, 45, 48, 86, and 89, wherein geographical area is considered, such as if 2 facilities are in the same area with the same risks (i.e. fault lines)).

As per **claim 15**, Feldman et al. teaches receiving a production plan and generating a material requirement plan for a component (See paragraphs 10-11 and 43, wherein the bill of materials and components for final products are identified, as well as the suppliers of these components).

As per **claim 16**, Feldman et al. discloses if quantities of the component are not available to support the material requirement plan for the components, identifying that shortages of the component are possible (See abstract, paragraphs 7-8, 11, 57, wherein it is discussed the risk caused by components not being available).

As per **claim 48**, Feldman et al. teaches a computer implemented method of identifying potential risk, the risk due to potential disruptions in material supply to a manufacturing facility, the method comprising:

identifying a set of components for an assembled product (See paragraphs 10-11 and 43, wherein the bill of materials and components for final products are identified, as well as the suppliers of these components);

identifying potential risk due to potential disruptions in continuity of material supply of any components from the set components, the potential risk due to potential disruptions in continuity of material supply including risks associated with supplier power risk, geopolitical risk, capital cycle risk and innovation risk (See paragraphs 7, 14, 43, 45, 48, 86, and 89, which disclose risks associated with the supplier, geography, and political issues, as well as capital risks associated with financial value. See also paragraphs 11-12 and 38).

However, Feldman et al. does not expressly disclose innovation risks or identifying respective sets of sub-components, the respective sets of sub-components being combined to provide a corresponding component of the set of components, each of the respective sets of sub-components comprising sub-components.

Hendrick et al. discloses:

identifying respective sets of sub-components (See pages 228-9 and page 231, figure 11-3, wherein subcomponents and subassemblies are determined);

the respective sets of sub-components being combined to provide a corresponding component of the set of components, each of the respective sets of sub-components comprising sub-components (See page 230-232, which discuss building a bill of materials and product structure trees by combining this information. See pages 228-9 and page 231, figure 11-3, wherein subcomponents and subassemblies are

determined); and creation risk (See page 230, where supplying vendors also receive supply for their produced components and build the deliverables given to the manufacturer who assemblies the final product).

However, Hendrick et al. does not expressly disclose innovation risk.

Both Hendrick et al. and Feldman et al. disclose components parts being supplied by a supplier so that an end product may be manufactured. Feldman et al. specifically identifies suppliers that supply the components to the manufacturer, as well as geopolitical and capital risks associated with this supplying. Feldman et al. further discloses bill of materials and identifying the components that are assembled to produce a final product. Hendrick et al. specifically discloses determining assembly and subassembly parts, generating bill of materials, and the problems that can possibly occur when procuring different parts from different outside vendors, such as the parts coming too early, too late, etc. It would have been obvious to one of ordinary skill in the art at the time of the invention to include subcomponents in the bill of materials and components of Feldman et al. in order to more efficiently meet the demand for the final product by more appropriately coordinating the components and subcomponents needed for the final product. See page 228-230 of Hendrick et al. which discloses these motivations.

Further, Feldman et al. discloses risks associated with suppliers that effect supply. Feldman et al. further states in paragraph 86 that other risk factors could affect the supply chain. Hendrick et al. discloses considering in the lead time it takes to get a component or subassembly from a vendor the time it takes for the supplying vendor to

assemble and build the component or subassembly. It is old and well known that innovation is a type of creation performed by supplying vendors, especially in the field of electronics where the components rapidly change with time. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to consider innovation in the creation component of lead time of Hendrick et al. in order to increase the accuracy of order scheduling by considering the risk on components and to final assembled products, thus ensuring that enough on-hand inventory is available to assemble the final product. See pages 230 and 232 of Hendrick et al., which discuss the importance of timing and available inventory when building an assembly. See also paragraphs 10, 13, and 86, of Feldman et al.

Conclusion

6. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan G. Sterrett whose telephone number is 571-272-6881. The examiner can normally be reached on 8-6.
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Beth Boswell can be reached on 571-272-6737. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JGS 7-6-09
/Jonathan G. Sterrett/
Primary Examiner, Art Unit 3623